California Department of Fish and Wildlife – Lead Agency

Ocean Ranch Restoration Project

Final Environmental Impact Report

SCH # 2018062020

February 2021

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Final Environmental Impact Report
for the

Ocean Ranch Restoration Project

SCH # 2018062020

Prepared for:

California Department of Fish and Wildlife, Lead Agency
619 2nd Street
Eureka, CA 95501

Ducks Unlimited, Inc.
1175 Nimitz Avenue, STE 110
Vallejo, CA 94592

Prepared by:

GHD Inc.
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Eureka, CA 95501

Contact: Misha Schwarz
Project Manager
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February 2021

Project Ref#: 11152100

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Acronyms and Abbreviations

AMP	Adaptive Management Plan
BMP	Best Management Practices
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
ESHA	Environmentally Sensitive Habitat Area
ERWA	Eel River Wildlife Area
FEIR	Final Environmental Impact Report
GHG	Greenhouse Gas
HMMP	Habitat Mitigation & Monitoring Plan
MMRP	Mitigation Monitoring and Reporting Program
MOU	Memorandum of Understanding
NAHC	Native American Heritage Commission
NCUAQMD	North Coast Unified Air Quality Management District
NOA	Notice of Availability
NOD	Notice of Determination
NOP	Notice of Preparation
OHV	Off-highway vehicle
ORU	Ocean Ranch Unit
ORRP	Ocean Ranch Restoration Project
PG&E	Pacific Gas and Electric
PRC	Public Resources Code
RDEIR	Recirculated Draft Environmental Impact Report

SCC	California State Coastal Conservancy
SLC	State Lands Commission
TCR	Tribal Cultural Resources
USFWS	U.S. Fish and Wildlife Service

1. Introduction

1.1 Purpose of the Final Environmental Impact Report

This Final Environmental Impact Report (FEIR) for the Ocean Ranch Restoration Project (Project) consists of the Draft EIR (DEIR), comments received on the DEIR, the Lead Agency's responses to comments, and revisions to the DEIR. The DEIR identified the likely environmental consequences associated with the Project, and recommended mitigation measures to reduce potentially significant impacts.

To certify the FEIR, the California Department of Fish and Wildlife (CDFW), as the Lead Agency, must find that:

- The FEIR has been completed in compliance with the California Environmental Quality Act (CEQA);
- The FEIR was presented to the decision making body of the Lead Agency and that the decision making body reviewed and considered the information contained in the FEIR prior to approval of a Project; and
- The FEIR reflects the Lead Agency's independent judgment and analysis. (CEQA Guidelines Section 15090).

1.2 Environmental Review Process

CEQA requires lead agencies to consult with public agencies having jurisdiction over a proposed project, and to provide the general public with an opportunity to comment on the DEIR. This FEIR has been prepared to respond to those oral and written comments received on the DEIR.

The Notice of Preparation (NOP) was made available for a 30-day public review period on June 13, 2018. CEQA Guidelines Section 15082 (b) requires a 30-day response period for input on the scope and content of the EIR. The NOP review period ended on July 16, 2018. A public scoping meeting was held on July 9, 2018 to inform agencies and interested parties about the Project, and to solicit input on environmental issues germane to the Project, as well as potential alternatives to the Project. Sections 1.3, 1.4 and 1.8 of the DEIR summarize the public scoping process, and list potential areas of controversy identified during the public scoping process.

The DEIR was made available for a 45-day public review on September 17, 2020. The review period ended at 5:00 pm on November 2, 2020. The document was made available for review at the Humboldt County Planning and Building Department, located at 3015 H Street, Eureka, California, 95501 and online at: http://wildlife.ca.gov/Notices. The DEIR was sent to the State Clearinghouse for distribution to State agencies, and was distributed to local, State, and Federal Responsible and Trustee Agencies and tribal governments. The general public

was advised of the DEIR through a Notice of Availability (NOA) posted at the Humboldt County Clerk's Office as required by law, and through a posting in the local newspaper, the Times-Standard, on September 18, 2020. One online public hearing to receive comments on the DEIR was held on October 13, 2020 at 6:00 p.m., consistent with Executive Order N-33-20.

The analysis provided in the DEIR, including the discussion of potential impacts, mitigation measures, and alternatives, along with comments received during the public review period as summarized in this FEIR, will be considered by CDFW when they certify the EIR and make a decision on the Project. If the Project is approved, recommended mitigation measures will be adopted and implemented as specified in the CDFW's resolution and an accompanying mitigation monitoring and reporting program (MMRP). The FEIR will be sent to the public agencies who commented on the DEIR at least 10 days prior to certification of the EIR per CEQA Guidelines Section 15088.

Finally, the additions made in this FEIR do not constitute "significant new information" requiring recirculation pursuant to Public Resources Code (PRC) section 21092.1 and CEQA Guidelines Section 15088.5. The FEIR merely clarifies, amplifies, and makes insignificant modifications to an adequate EIR, per CEQA Guidelines Section 15088.5(b).

1.3 Document Organization of the FEIR

The FEIR is organized into the following chapters:

- Chapter 1 – Introduction. This chapter discusses the use and organization of this FEIR and the environmental review process.
- Chapter 2 – Comments and Responses. This chapter includes a list of persons, organizations, and public agencies who commented on the DEIR, reproductions of the letters received on the DEIR, and responses of the Lead Agency to those comments.
- Chapter 3 – Errata. This chapter includes proposed text modifications to the DEIR.
- Chapter 4 – References. This chapter provides references utilized in this FEIR.
- Chapter 5 – List of Preparers. This chapter includes the list of individuals who contributed to this document.

2. Comments and Responses

2.1 Summary of Comments Received

During the public comment period for the DEIR, CDFW received seven comment letters/emails which included 90 individual comments on the DEIR. A list of the comment letters and comments received is shown below in Table 2-1 (either by agency/organization or last name of the individual). With the exception of providing general support for the project, no comments were received at the public meeting held on October 13, 2020. Per CEQA Guidelines Sections 15088 and 15132, comments which do not raise environmental issues or comment on the adequacy of the DEIR, but merely provide information or general support for/opposition to the Project, receive "comment noted" in the response.

Table 2-1 Comments Received on the DEIR

Letter	Agency/Organization	Last Name	First Name	Letter Date
Written Comments Received				
A	CA State Lands Commission	Gillies	Eric	11/2/2020
B	Wiyot Tribe	Hernandez	Ted	11/2/2020
C	Redwood Region Audubon Society	Ogan	Chet	10/31/2020
D	Public Comment	Romo	Ted	11/2/2020
E	Public Comment	Miller	Alan	11/3/2020
F	CA Department of Conservation – Geologic Energy Management Division	Wardlow	Charlene	10/29/2020
G	Public Comment	Driscoll	Uri	11/1/2020

2.2 Response to Comments

This section includes copies of the comment letters and e-mails received during the 45-day public review period for the DEIR. Responses to each comment are provided after each letter.

Letter A – California State Lands Commission; Eric Gillies

STATE OF CALIFORNIA GAVIN NEWSOM, *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

JENNIFER LUCCHESI, *Executive Officer*
(916) 574-1800 *Fax* **(916) 574-1810**
California Relay Service TDD Phone **1-800-735-2929**
from Voice Phone **1-800-735-2922**

Contact Phone: **(916) 574-1890**

Established in 1938

November 2, 2020

File Ref: SCH # 2018062020

California Department of Fish and Wildlife
Northern Region (Region 1), Eureka Field Office
Attn.: Gordon Leppig, Senior Environmental Scientist Supervisor
619 2nd Street
Eureka, CA 95501

VIA ELECTRONIC MAIL ONLY (orurestoration@wildlife.ca.gov)

Subject: Draft Environmental Impact Report (EIR) for the Ocean Ranch Restoration Project, Humboldt County

Dear Mr. Leppig:

The California State Lands Commission (Commission) staff has reviewed the subject Draft EIR for the Ocean Ranch Restoration Project (Project), which is being prepared by the California Department of Fish and Wildlife (CDFW), Northern Region (Region 1). The CDFW, as the public agency proposing to carry out the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Commission is a trustee agency for projects that could directly or indirectly affect State sovereign land and their accompanying Public Trust resources or uses. Additionally, because the Project involves work on State sovereign land, the Commission will act as a responsible agency. A letter on the Notice of Preparation was previously submitted by Commission staff on July 16, 2018 (attached). A-1

Commission Jurisdiction and Public Trust Lands

The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). All tidelands and submerged lands granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust Doctrine.

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the A-2

United States in 1850. The state holds these lands for the benefit of all people of the state for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the ordinary high-water mark, which is generally indicated by the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court. Such boundaries may not be readily apparent from present day site inspections.

In 1988, the Commission authorized a 49-year General Permit – Public Agency Use, Lease No. PRC 7153.9, to the California Department of Fish and Game (Item 11, January 21, 1988). The lease authorized levee construction and maintenance for wildlife habitat restoration. Based upon the information provided and a preliminary review of Commission records, the proposed Project, with the exception of the portion in the Dune Restoration Area, appears to be located within this lease area on tidally influenced State sovereign land. An amendment to the lease or a new lease may be required from the Commission for the Project. Please contact Ninette Lee, Public Lands Manager (see contact information at end of letter) to further discuss Project leasing requirements.

A-2

Project Description

CDFW proposes to restore and enhance tidal estuarine and coastal dune habitats within a portion of the Ocean Ranch Unit (ORU) of the Eel River Wildlife Area (805 acres) to meet its objectives and needs as follows:

- To restore and expand natural estuarine function in the restoration area, and to assist in recovery and enhancement of habitat for native fish, invertebrates, wildlife, and plant species
- To restore natural dune function, and to assist in recovery and enhancement of habitat for native species, state and federally listed or otherwise sensitive plants, and associated sensitive natural communities

From the Project Description in the Draft EIR, Commission staff understands that the Project includes the following components that have potential to affect State sovereign land:

A-3

- Tidal restoration activities include:
  - Breaching external and internal levees
  - Lowering portions of the external levee along McNulty Slough
  - Removing portions of internal levees
  - Excavating tidal channels
  - Creating transitional high marsh habitat
  - Constructing habitat ridges
  - Installing ditch plugs and filling internal ditches
- Public access improvements include:
  - Improving the access road into the restoration area and the existing parking area
  - Constructing a new parking area
  - Installing a non-motorized boat put-in
  - Establishing a trail system

Environmental Review

Commission staff requests that the CDFW consider the following comments on the Draft EIR, to ensure that impacts to State sovereign land are adequately analyzed for the Commission's use of the certified Final EIR in acting on a future lease application for the Project.

1. Project Description:

   a. It is understood that sediment mobilization and redeposition with the Project Area and study area are natural and ongoing processes within the Eel River delta; however, if the new channels do require minor sediment removal in the future to function properly, how would this work be conducted? Commission staff suggest that the "Maintenance" section on Draft EIR page 2-20 include this possible activity. A-4

   b. Section 2.7.2 discusses the possible use of sheet pile walls to act as cofferdams. Please provide a description of how they would be installed and what equipment would be used. A-5

Thank you for the opportunity to comment on the Draft EIR for the Project. As a responsible and trustee agency, the Commission will need to rely on the certified EIR for the issuance of any lease as specified above and, therefore, we request that you consider our comments prior to certification of the EIR. Please send copies of future Project-related documents, including electronic copies of the Final EIR, Mitigation Monitoring and Reporting Program, Notice of Determination, CEQA Findings and, if applicable, Statement of Overriding Considerations, when they become available. A-6

Please refer questions concerning environmental review to Cynthia Herzog, Senior Environmental Scientist, at (916) 574-1310 or cynthia.herzog@slc.ca.gov. For questions concerning archaeological or historic resources under Commission jurisdiction, please contact Staff Attorney Jamie Garrett at (916) 574-0398 or jamie.garrett@slc.ca.gov. For questions concerning Commission leasing jurisdiction, please contact Ninette Lee, Public Land Manager, at (916) 574-1869 or ninette.lee@slc.ca.gov.

Sincerely,

Eric Gillies, Assistant Chief
Division of Environmental Planning
and Management

Attachment

cc: Office of Planning and Research
C. Herzog, Commission
J. Garrett, Commission
N. Lee, Commission

Letter A – Response to Comments

Response to Comment A-1

Comment regarding the State Land Commission's (SLC) jurisdiction and management authority noted.

Response to Comment A-2

Comment regarding SLC history, the specific area of the Project that SLC has jurisdiction over, and the potential need for an amended or revised lease from SLC is noted. In October 2018, CDFW received confirmation from SLC that the proposed tidal estuarine restoration work was authorized under the existing lease; that the activities proposed for the dune restoration area would not affect mineral rights under the jurisdiction of SLC; and that an amendment of the existing lease or a new lease from SLC for the Project would not be required (Lee pers. comm. 2018). The substantive aspects of the Project presented to SLC in 2018 are consistent with the Project described in the DEIR and would not change the SLC determination.

Response to Comment A-3

Comment summarizing Project objectives and components noted.

Response to Comment A-4

Sediment mobilization and redeposition within the Project Area and study area are natural and ongoing processes within the Eel River delta. Ongoing management of sediment to promote channel function is not anticipated due to the dynamic nature of natural estuarine function which the Project proposes to restore. However, minor sediment removal may be necessary if channel morphology changes to the extent that Project goals and objectives are not being met. Please refer to Section 3.1.1 of this FEIR for errata text pertaining to maintenance of channel function under the proposed Project.

Response to Comment A-5

DEIR Section 2.7.2 notes that cofferdams would be utilized to isolate the work area around BI-3, and would consist of earthen cofferdams and/or sheetpile walls. Should sheetpile walls be utilized, they would either be pushed subsurface via heavy equipment, or would be vibrated subsurface by a vibratory hammer from atop a nearby levee. Sheetpile walls would not be tapped or driven into the ground.

Response to Comment A-6

CDFW appreciates SLC's comments on the DEIR as a Responsible/Trustee Agency, and will make available electronic copies of the FEIR, MMRP, Notice of Determination (NOD) and CEQA Findings to SLC when they are complete.

Letter B – Wiyot Tribe; Ted Hernandez and Adam Canter

November 2, 2020

California Department of Fish and Wildlife
Attention Gordon Leppig, Project Manager
619 2nd Street
Eureka, CA 95501

RE: Ocean Ranch Restoration Project AB52/Draft EIR Comments

Ha'wa'lou (greetings) California Department of Fish and Wildlife (CDFW)

We hope these comments find you and your families healthy and well during these unprecedented times. The Wiyot Tribe have long supported ecological restoration withing their ancestral lands and waters and are supportive of the Ocean Ranch Unit (ORU) restoration concepts and goals of the proposed project. In general, the Tribal members and staff we spoke with regarding the project were supportive of its efforts to restore native species and ecological processes. Some questions and potential concerns and comments remain for the Tribe. B-1

The Sand Road, which commences from the base of Table Bluff, south to the north spit of the Eel River (*Wiya't*), is an important access road for Tribal members practicing traditional resource procurement activities, including lamprey eeling (*Entosphenus tridentatus*), which is a species of monumental cultural significance, and a species of concern, that appears to be in decline. There are limited ancestral sites available to the Tribe to practice this art, which illustrates the importance of maintaining access along the Sand Road. It was unclear within the DEIR if or how the Sand Road will be impacted by the proposed project, which the Tribe hopes can be avoided. B-2

The Sand Road has historically provided access for firewood collection by Tribal members, who represent a severely economically disadvantaged community, whose primary home heating fuel is firewood. The Tribe's right to collect firewood has been revoked during this project analysis and permitting phase, which we hope can be re-instated following the commencement and/or completion of the project. The right and ability to gather firewood from the beach and estuary is significant both traditionally and from an environmental justice perspective, and many Tribal members have complained about the ban on collecting firewood at ORU. B-3

While the Tribe has normally been against any use of chemicals and herbicides on their ancestral lands, we understand that a restoration project of this size requires great effort and novel techniques, and that the trade-off between greenhouse gas (GHG) emissions of using mechanical methods and the risk of potential fuel spills is a somewhat comparable to non-target impacts from herbicide. That said, we appreciate the mitigation measures proposed for application to the proposed herbicide treatments, but would also like to see some post-treatment fate and transport monitoring to ensure that no imazapyr has accumulated in waters, soils, and plants. This is especially important due to the culturally important food-plant, the dune strawberry (*lash*) (*Fragaria chilensis*), which occurs within the restoration site, a plant that the south spit was known for in Wiyot history, and is still known for today. B-4

1000 Wiyot Drive · Loleta, California 95551 · (707) 733-5055 · (800) 388-7633 · FAX (707) 733-5601

The Tribe is also interested in reducing potential impacts to the culturally important geophyte and Indian potato, *Brodiaea terrestris,* which is known to occur within the restoration area. This species is on the "Wiyot List of Plant Species of Environmental and Cultural Concern" and is a "Tribal Trust Species". The Wiyot Natural Resources Department (WNRD) would like to the opportunity to map and identify populations of *Brodiaea terrestris* on the ORU during the spring of 2021 so as to assist with avoiding impacts and to mitigate any un-avoidable impacts through bulb collection and transplantation, if needed. Several other special status plants noted within the project are "Tribal Trust Species" and the Tribe appreciates the mitigation measures proposed to avoid impacting those species. Please see the attached "Wiyot List of Plant Species of Environmental and Cultural Concern". B-5 B-6

Finally, the Wiyot use the McNulty slough motorized boat launch, and support DEIR Alternative 2, which is noted as being the environmentally superior alternative and will reduce impacts to the McNulty slough (Area D), relative to the full proposal. Some Tribal members are concerned about the potential for increased slough sedimentation from the project related to erosion and sheer stress, which could impact the navigation ability of motorized boats in the slough. Some Tribal members were concerned about increased visitor use and associated impacts related to access improvements. In general, we hope that the project will benefit salmonid and native fish populations, native plants, and sensitive natural communities, and would appreciate any future opportunities to consult on the project. We ask that the inadvertent discovery protocol and pre-soil disturbance archaeological sampling be followed. Thank you for your work, time, and consideration. *Rra'dutwas* (with kindness), B-7 B-8 B-9 B-10 B-11

Ted Hernandez
Wiyot Tribal Chairman, THPO
Table Bluff Reservation
1000 Wiyot Dr.
Loleta, CA 95551
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707-733-5055

Adam Canter
Natural Resources Specialist
Table Bluff Reservation
1000 Wiyot Dr.
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Letter B – Response to Comments

Response to Comment B-1

CDFW appreciates the Tribe's comments on the DEIR. Responses to the Tribe's specific comments on the DEIR are provided below.

Response to Comment B-2

Under the proposed Project, the Sand Road would be utilized to provide construction access to the southern portion of the tidal restoration area, and during invasive plant management activities within the dune restoration area (please see page 2-18 of the DEIR). No changes in public access to the Sand Road are proposed. On page 2-15 of the DEIR, it is erroneously stated in the Project Description that a gate would be installed at the northern terminus of the Sand Road. Please see Section 3.1.2 of this FEIR for proposed errata text to remedy this misinformation.

Page 2-16 of the DEIR describes a new 0.25-mile (0.4 kilometer) long trail which would be established to extend from the new parking area to the Sand Road, utilizing the modified levee between Areas A and E. This new trail would provide a potential additional access point to the Sand Road. It would be accessible on foot at all times the Wildlife Area is open to the public; however, it would only be accessible to vehicles when the gate into the Project Area at Table Bluff Road is open.

Response to Comment B-3

CDFW regulations addressing the collection of firewood from Project Area beaches are independent of and not addressed under the Project. The Project would have no effect on the availability of firewood for collection in the future.

Response to Comment B-4

Under the Project, Imazapyr could be used in the tidal restoration area to control dense-flowered cordgrass where other methods have proven ineffective, or where treatment costs would be substantially reduced. Within the dune restoration area, Imazapyr would be used to kill European beachgrass rhizomes after prescribed burning, or to selectively treat re-sprouts after mechanical or manual treatments. In all instances, Imazapyr would only be applied in accordance with the label by a Qualified Applicator, or under the supervision of a Qualified Applicator; during appropriate weather conditions (e.g., dry with no rain forecast for 48 hours, winds less than 10 miles per hour [mph]); and at application rates and quantities that minimize the potential for herbicide drift. In addition, prior to application, applicators would be trained to target invasive plants and avoid native vegetation. Whenever feasible, vegetation biomass would be reduced before herbicide application through prescribed burning, mowing, grinding, or manual/mechanical removal to reduce the amount of herbicide needed. The lowest effective herbicide application rates and concentrations that do not exceed the label requirements would be used.

Imazapyr is classified as practically nontoxic to freshwater and estuarine/marine fish and invertebrates, birds, and bees, and is registered for use as an aquatic herbicide (EPA 2014), indicating that it can be used in or near surface water to control aquatic and terrestrial plants (See Page 3.8-11 in the DEIR). Fate and transport monitoring is not a specific requirement of the label or otherwise recommended by EPA. The analysis of Imazapyr used in this DEIR is tiered off of the Programmatic Final EIR for the Humboldt Bay Regional *Spartina* Eradication Plan (PEIR) (H.T. Harvey & Associates and GHD 2013). See page 70 of the Draft *Spartina* Eradication Plan (H.T. Harvey & Associates 2012) which states the following:

> *Imazapyr has been studied extensively to determine its effects on the environment and on non-target species. Imazapyr rapidly degrades in sunlight and dissipates in water within several days. Pless (2005) found no detectable residues of imazapyr in either water or sediment within two months. Imazapyr is rapidly diluted with incoming tides in estuarine systems. The toxicity of imazapyr to animals is low. It has a low potential for bioaccumulation and biomagnification, so adverse impacts to fish and wildlife and [are] unlikely to occur through food web exposure (Kerr 2010). It is highly soluble in water, but because of its low solubility in lipids, it does not concentrate in animal fat or organ tissue (Pless 2005). The greatest risk of fish and wildlife is during and immediately following application when herbicides are present at relatively high concentrations. At those times, organisms that live in the water column, such as algae, non-target plants, fish and aquatic invertebrates may be affected. The period for acute exposure is fairly short because imazapyr degrades rapidly via photolysis.*

As listed in the Response to HBK-6 in the Programmatic Final EIR, according to an expert declaration made by Dr. Susan Kegley "When tidal marshlands are treated with an herbicide, the fate of the herbicide is quite different than that observed in a riverside setting. Studies tracking the fate and transport of imazapyr in tidal marshlands show that imazapyr concentrations are highest when the tide first comes in as the water initially washes over the treated area. The half-life of imazapyr in the treated part of the estuary of [is] 1.6 days. In short, the incoming tide washes away the water-soluble imazapyr."

The application of Imazapyr to European beachgrass in the dunes is not anticipated to have long-term impacts on water, soil, or non-target plant communities. In particular impacts to dune strawberry (*Fragaria chilensis*) and other plant species typical of native dune mat communities would be avoided through implementation of the avoidance and minimization measures summarized above and listed in the DEIR. In addition, other recent and ongoing dune restoration projects which have utilized Imazapyr, such as ongoing work by the U.S. Fish and Wildlife Service (USFWS) on Humboldt Bay National Wildlife Refuge, have seen success both in the eradication of European beachgrass and reestablishment of native dune mat communities, including those likely to support populations of dune strawberry. Based on these successes, the EPA application requirements for the herbicide, and the measures

that would be implemented to avoid and minimize impacts to water quality, fish and wildlife, and non-target plant communities, post-treatment fate and transport monitoring is not proposed under the Project.

Response to Comment B-5

CDFW welcomes the opportunity to consult and collaborate with the Wiyot Tribe to conduct mapping and identification of any culturally important plant species within the restoration area, including Indian potato (*Brodiaea terrestris*) and other Tribal Trust species. The single occurrence of Indian potato we are aware was found in native dune mat habitat, which will generally be avoided under the Project. Further collaboration on additional measures to protect or expand Tribal Trust species in the Project Area can be coordinated through CDFW's Lands Program.

Response to Comment B-6

Plant species from the "Wiyot List of Plant Species of Environmental and Cultural Concern" will be incorporated into re-planting planning as feasible. This effort will be coordinated with the Wiyot Tribe separately through the CDFW Lands Program.

Response to Comment B-7

Comment noted.

Response to Comment B-8

As described in Section 3.5 (pages 3.9-27 to 3.9-28), erosion downstream of the Project Area (e.g., Hawk Slough, North Bay, and the Eel River proper) is not expected to occur under the Project. However, Project-related changes in water velocity and sheer stress could result in erosion of the eastern levee of McNulty Slough, which could increase sedimentation in the channel and, potentially, navigation of motorized boats over time.

Hydraulic modeling in support of the Project (AECOM 2019) was utilized to identify Project alternatives that would achieve Project objectives and not result in adverse hydraulic impacts, including changes in hydrology that might impact the eastern levee of McNulty Slough. Alternative 2 (the environmentally superior alternative) reflects a modified design, derived from the results of the hydraulic model, that avoids adverse Project-related hydraulic impacts by reducing the number of breaches in the upstream portion of McNulty Slough (differences in levee breaching locations are visible when comparing Figure 2-3 [Proposed Project Components] with Figure 4-1 [Alternative 2 Site Plan]). See page 4-9 of the DEIR for additional information on how water velocity within McNulty Slough would not substantially change under Alternative 2, and therefore would not be a significant source of erosion and sedimentation within McNulty Slough. Limited increases in sediment delivery to McNulty Slough during construction and implementation of the tidal restoration Project are expected to be short-term; generally reduced by measures to

avoid and reduce erosion; and not likely to have long-term impacts on boat navigation in McNulty Slough.

Response to Comment B-9

One of the Project goals is to improve public access within the estuarine restoration area, and to maintain public access in the dune restoration area. CDFW appreciates the Tribe's concern that increased visitor use could result in associated impacts related to access improvements. The improved public access portions of the Project exist in the estuarine portion of the Project and are described in DEIR Section 2.6.2 (page 2-15); no changes to public access are proposed in the dune restoration area. Existing visitation at the study area is approximately ten visitors per day (page 3.13-1), and anticipated visitation following Project implementation is estimated at 30 to 40 additional vehicles per week (page 3.13-5). Assuming two visitors per vehicle, there would be approximately ten additional visitors per day, for a total of approximately 20 visitors per day (baseline plus anticipated use). The public access improvements are designed to safely accommodate these anticipated increases in visitor uses and protect sensitive habitats and wildlife populations (e.g., through use of designated trails, maintained non-motorized boat put-in). See discussion on page 3.13-6 in the DEIR under Impact REC-2 for a discussion on how proposed public access improvements under the Project, as designed, are not likely to cause an environmental impact. To reiterate CDFW's commitment to providing environmentally responsible and sustainable public access, language will be added to the proposed interpretive signs in the Project Area that state visitors shall remain on trails. Please see Section 3.1.2 of this FEIR for updated text in the Project Description documenting this change.

Response to Comment B-10

Comment noted.

Response to Comment B-11

CDFW will follow the inadvertent discovery protocol and all measures to protect cultural resources as stated in Mitigation Measures CR-1 through CR-5 in the DEIR.

Letter C – Redwood Region Audubon Society; Chet Ogan

REDWOOD REGION AUDUBON SOCIETY
P.O. BOX 1054, EUREKA, CALIFORNIA 95502

A MEMBER OF THE NATIONAL AUDUBON SOCIETY

California Department of Fish and Wildlife
619 2nd Street Eureka, CA 95501
Contact: Gordon Leppig, Project Manager
Email: orurestoration@wildlife.ca.gov

RE: Ocean Ranch DEIR

31 October 2020

Dear Gordon Leppig:

Purpose: We advocate for protection of birds and wildlife by supporting local conservation efforts to protect wildlife and their habitat
Our Mission is to a) act to promote a wise, balanced, responsible, and ethical use of natural systems on a local, national, and global scale; and b) protect the biotic and abiotic components of local, national, and global natural systems.

Having been involved with management of this unit of Eel River Wildlife Area **we approve of the project goals:**
1. To restore and expand natural estuarine function in the restoration area, and to assist in recovery and enhancement of habitat for native fish, invertebrates, wildlife and plant species
2. To restore natural dune function, and to assist in recovery and enhancement of habitat for native species, State and Federally-listed or otherwise sensitive plants, and associated Sensitive Natural Communities.

C-1

One of our major concerns was allowing the area to help accommodate upward of 750,000 shorebirds that migrate through and over-winter in our estuarine waters, mudflats, and salt marshes. As you may be aware Western Hemisphere Shorebird Reserve Network (WHSRN) has upgraded our status from International recognition to Hemispheric recognition based on recent shorebird censuses done by Dr. Mark Colwell and several researchers, monetarily supported by our local Audubon Chapter as well as California Audubon. We understand your reasons for maintaining all the tools potentially needed for vegetation management.

C-2

C-3

C-4

Thank you and we look forward to working with CDFW on this project if requested.

/s/ Chet Ogan

Chet Ogan
Conservation Committee Co-chair

Letter C – Response to Comments

Response to Comment C-1

Comment noted.

Response to Comment C-2

The Project would support continued shorebird use and migrating shorebirds in the Project Area.

Response to Comment C-3

Comment noted.

Response to Comment C-4

Comment noted.

Letter D – Ted Romo

From: Ted Romo <blackbrantsky@yahoo.com>
Sent: Monday, November 2, 2020 9:35 PM
To: Wildlife Ocean Ranch Unit Restoration Project <ORURestoration@wildlife.ca.gov>
Subject: Ocean Ranch Restoration Project Draft EIR Comments

California Department of Fish and Wildlife
619 Second St.
Eureka, CA 95501
Attention: Mr. Gordon Leppig, Project Manager
Email: orurestoration@wildlife.ca.gov

Subject: Ocean Ranch Restoration Project Draft EIR Comments

Dear Mr. Gordon Leppig:

This email explains an inconvenient truth! The process of gathering the information for this project is hypocrisy and had a very clear "agenda" from the very beginning! D-1

Two years ago Phil Grunert and I sent a letter to you, Gordon Leppig, Project Manager, expressing our concerns about this "restoration project". (See Email #1 below) I also contacted Michelle Gilroy to ask about having a local stakeholder representative from our local waterfowl hunters be part of the Ocean Ranch Unit Technical Advisory Team. Michelle informed me, (See Email #2 below), that only the members listed in her email were on the Ocean Ranch Unit Technical Advisory Team. It is interesting that she listed "several local consultants" from the various local fish and avian agencies (Pacific Coast Fish, National Marine Fisheries Service, California Sea Grant, California Trout, Pacific Coast Fish, Wildlife and Wetlands Restoration Association, Pacific States Marine Fisheries Commission, Redwood Region Audubon Society); however, there is not one representative on this committee from California Waterfowl Association or the Humboldt County Fish and Game Advisory Committee! D-2

When I asked Michelle about the lack of representation, she informed me that DU was representing the local waterfowl hunters. However, since DU has a financial partnership with CDF&W on this project, then DU has a conflict of interest. D-3 The local waterfowl hunters do not agree with the direction this project is going because doing away with the fresh water sources in the Ocean Ranch area will eliminate this area from being used by a wide range of diverse mammals and avian species that rely on this fresh water for survival. D-4

DU does NOT represent the local waterfowl hunters on this issue. The local stakeholders, who engage in waterfowl hunting 106 days a year, were deliberately kept out of this entire process!! This is the inconvenient truth!! D-5 D-6

Sincerely,

Ted Romo
(707) 496-0525

Email #1

Mr. Gordon Leppig, Project Manager
CA DFW
619 Second St.
Eureka, CA 95501

July 30, 2018
Dear Mr. Leppig:

These comments are submitted for your consideration and use in the Ocean Ranch Unit (ORU), Eel River WMA Restoration Plan as described in your recent Notice of Preparation. Information has been sought from professional natural resource managers and scientists familiar with the Technical Advisory Committee (TAC) or team that worked on preparation of the Feasibility Study for Restoration of the Ocean Ranch Unit of the Eel River Wildlife Management Area (WMA). We have utilized project descriptions from the feasibility study, NOP documents and presentations to understand the proposed project.

We have been provided generous access to documents via email by Michelle Gilroy in the Eureka CA DFW Region 1 (Dept.) office, including the Final CDFW ORU ERWA – CDFW Science Symposium Power Point file, as well as the presentation from the July 9, 2018 EIR Scoping meetings.

We support the stated goals of improving tidal flow in most of the "lowland" areas on the ORU, removing Invasive species, especially dune grass habitats, and avoiding any adverse impacts to adjacent private landowners. We believe this can be done without breeching all of the levees in the manner reflected in project documents distributed as part of the NOP workshops. In fact retaining some of the existing perimeter and internal levees on ORU will meet the projects stated intent to support a DFW ecological management/restoration plan that includes DIVERSE (emphasis added) species and management regimes that include tidal and brackish wetlands.

We believe that the Dept. would be well served to utilize significant portions of Alternative #4 as described in the Feasibility Study. Retaining all exterior levees around Area C, 40 acres and considering retaining management capability in Unit B, 111 acres would result in more habitat diversity for both fish and avian wildlife species. Use of a "Roughened Channel" or muted tide gate in Areas C, D, and E would provide freshwater and low salinity brackish water wetland habitats that are in short supply around Humboldt Bay and the tidal portion of the Eel river delta.

We are concerned that the freshwater wetlands described in the Feasibility Study will be lost and have adverse impacts to fisheries diversity and avian species use if all existing levees are breeched. We look forward to having further discussions with the talented staff of CA DFW in Eureka and members of the ORU restoration project team.

Sincerely,

Ted Romo (707) 496-0525
Phil Grunert (707) 599-5775

Email #2

From: "Gilroy, Michelle@Wildlife" <Michelle.Gilroy@wildlife.ca.gov>
Date: August 29, 2018 at 12:12:09 PM PDT
To: Ted Romo <blackbrantsky@yahoo.com>
Cc: "Bartolotta, Charles@Wildlife" <Charles.Bartolotta@wildlife.ca.gov>, "Leppig, Gordon@Wildlife" <Gordon.Leppig@wildlife.ca.gov>
Subject: Ocean Ranch Unit Technical Advisory Team members and other questions

Good Morning, Ted,

Thanks for the call yesterday.

Ocean Ranch Unit

Partners, Funding and Staff

Ducks Unlimited, in partnership with CDFW staff, has recently secured project planning funds from the California Wildlife Conservation Board, and initial project implementation funds from the NOAA Restoration Center. To complete the restoration design and environmental compliance process, this second phase of restoration planning will consist of a continued CDFW and Ducks Unlimited partnership, with additional assistance from several local consultants and a Technical Advisory Committee (TAC). The TAC includes representatives from the U.S. Army Corps of Engineers, the Bureau of Land Management, U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Coastal Commission, California State Coastal Conservancy, North Coast Regional Water Quality Control Board, California Sea Grant, California Trout, Humboldt County Resource Conservation District, Humboldt State University, Redwood Region Audubon Society, private landowners, and the Wiyot Tribe. Additional project partners include AmeriCorps, Tom Origer and Associates, Pacific Coast Fish, Wildlife and Wetlands Restoration Association, GHD Inc., H.T. Harvey and Associates, Moffatt and Nichol, Northern Hydrology Engineering, Pacific Coast Joint Venture, and the Pacific States Marine Fisheries Commission.

CDFW staff who have served on the project management team include Michelle Gilroy, Allan Renger, Scott Monday, Kirsten Ramey, James Ray, Mark Smelser, Gordon Leppig, Michael van Hattem, Jennifer Olson, Linda Miller, Clare Golec, Charles Bartolotta, Robert Sullivan, Tony LaBanca, Mark Wheetley, Scott Downie, Adam Frimodig, Jeff Dayton, Mike Wallace, Vicki Frey, John Mello, and Karen Kovacs.

Information above is available online with an article about the project I may have sent to you already:

https://www.wildlife.ca.gov/Science-Institute/News/cdfw-and-partners-work-to-restore-ocean-ranch-unit-in-humboldt-county

Charles was not certain if duck stamp funds were awarded previously for Ocean Ranch Unit.

Charles, Ted also asked if there was the possibility to obtain permission to fly a drone out at ORU?

Thank You,

Michelle

Michelle M. Gilroy

District Fisheries Biologist

California Department of Fish and Wildlife

619 2nd Street

Eureka, CA 95501

707-441-5791

Michelle.Gilroy@wildlife.ca.gov

www.wildlife.ca.gov

California Department of Fish and Wildlife Home Page

The Department of Fish and Wildlife manages California's diverse fish, wildlife, and plant resources, and the ha...

Letter D – Response to Comments

Response to Comments D-1, D-2, and D-3

The commenter is correct that participation in the Technical Advisory Committee (TAC) for the Project was limited to representatives from certain groups, including select regulatory agencies, the Wiyot Tribe, funding entities, species experts, local landowners, and other stakeholders with particular expertise in estuarine restoration or the Eel River estuary, that were well suited to provide input on the design and alternative development process for the Project. However, numerous opportunities for other interested parties to provide input on the Project have been provided since 2008, both informally (i.e., during phone calls, emails, site visits, meetings, and conferences) and formally, as part of the CEQA Process (i.e., public scoping, public comments on the DEIR). Alternatives focused on preservation of freshwater wetland habitats were considered in the 2015 Feasibility Study for the Project (Ducks Unlimited, Inc. 2015), and staff from CDFW and DU met or spoke with representatives from the California Waterfowl Association and the Humboldt County Fish and Game Advisory Committee on several occasions in the summer and fall of 2018 to discuss the Project and to listen to concerns about potential impacts on waterfowl hunting opportunities. Those considerations are discussed in the both the 2015 Feasibility Study and Section 4.2.1 of the DEIR (pages 4-2 and 4-3).

CDFW is the landowner and manager of the Ocean Ranch Unit, and solely responsible for developing the long-term goals for management of the Project Area. Ducks Unlimited is providing design, engineering, and environmental compliance support for the Project, and acting as the recipient of several federal and state planning and implementation grants for the Project. The partnership between CDFW and DU on this Project does not pose a conflict of interest because the arrangement is a typical grantor-grantee partnership.

Response to Comment D-2 above includes reference to two previous emails (Email #1 and Email #2). Email #1 was written in response to the Project's Notice of Preparation, and these comments were captured and summarized in the DEIR in Section 1.8, and is not further addressed in this FEIR. Email #2 is not a component of the EIR process and has not been addressed in this FEIR, although the contents of Email #2 are noted, specifically that local representation via the California Waterfowl Association or the Humboldt County Fish and Game Advisory Committee are not included in the Technical Advisory Team. Please see above for response specific to the membership of the TAC and outreach to the California Waterfowl Association and the Humboldt County Fish and Game Advisory Committee during development of the Project.

Response to Comment D-4

As stated on page 2-1 of the DEIR, the Project Area has been converting to brackish marsh since 1994 when a levee separating McNulty Slough from the east side of Area A failed, allowing tidal inundation of Area A. The breach, in combination with

subsequent failures of other water control structures within Ocean Ranch and between Ocean Ranch, McNulty Slough and North Bay, resulted in decisions by CDFW to discontinue management and maintenance of artificial freshwater wetland habitat and have allowed most of the area to revert to saltmarsh or brackish marsh (Ducks Unlimited, Inc. 2015).

The majority of the existing Project Area is currently tidally influenced (see Figure 3.4-1 – Existing Aquatic Resources in the DEIR), with limited freshwater resources in the northern portion of the Project Area. It is anticipated that there would be a conversion of approximately 25 acres of freshwater habitat to brackish habitat following Project implementation. See page 3.4-64 in the DEIR for a description of how the proposed Project may affect freshwater-dependent species, such as the Northern Red-legged Frog. It is anticipated that waterfowl would continue to use the available freshwater habitat following Project implementation.

Response to Comment D-5 and D-6

Please see response to Comment D1 through D3. Please also note that seasonal waterfowl hunting will continue to be allowed in the Project Area after the restoration project is implemented.

Letter E – Alan Miller

From: Alan Miller <wiyot79@gmail.com>
Sent: Tuesday, November 3, 2020 11:10 AM
To: Wildlife Ocean Ranch Unit Restoration Project <ORURestoration@wildlife.ca.gov>
Subject: Ocean Ranch Restoration Project Draft EIR Comments

Warning: This email originated from outside of CDFW and should be treated with extra caution.

California Department of Fish and Wildlife
619 Second St.
Eureka, CA 95501
Attention: Mr. Gordon Leppig, Project Manager
November 2, 2020
Email: orurestoration@wildlife.ca.gov

Subject: Ocean Ranch Restoration Project Draft EIR Comments

Dear Mr. Gordon Leppig:

I am a member of the Wiyot tribe. As my family comes from Túlúwát and many other villages all over Wiyot Country and I object to the overall concept that you can take my ancestral rights away by dictating how, when, and where I use my ancestral land that you call Ocean Ranch Restoration Project area. As there are many Wiyots that are very upset, as we see this as in an infringement on our sovereignty, substance, subsistence. E-1 E-2

Again I will say, my Wiyot/Coonskin/Wanveer family have NEVER SIGNED AWAY OUR RIGHTS, to hunting, fishing, gathering and the usage of the lands. E-3

Again I will say, at a Fish And Game advisory board meeting several years ago, I voiced my concerns at my own free will opposing such infringement's on my persons and my family. E-4

Yes I have a vested interest in protecting my people's valuable resources. E-5

As I hope we can find a peaceful solution to this, infringement. E-6

§ 6254 (r): California Public Records Act Exemption from Disclosure

§ 65351: Native American Involvement in General Plan Proposals

§ 65352: Referral of Action on General Plan Changes to Native Americans E-7

§ 65560, 65562.5: Consultation with Native Americans on Open Space

§ 12600-12612: Attorney General- Environmental Action
Permits

§ 25373, 37361: City/County Protection of Historic Resources

§ 5020.7: Public promotion of historical resource protection

§ 5097.9: Non-interference with Native American religious expression

E-7

United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974),

Read more: Native American Rights - Hunting And Fishing Rights - Court, Tribes, Treaties, and Indian - JRank Articles https://law.jrank.org/pages/8750/Native-American-Rights-Hunting-Fishing-Rights.html#ixzz6ckvNYCJ0

Sincerely,

Leonard Alan Miller
Member of the Wiyot Tribe

Letter E – Response to Comments

Response to Comment E-1

CDFW recognizes that the Project would occur on Wiyot ancestral land (see Section 3.5.1, page 3.5-1 of the DEIR). The goals of the Project are to restore and expand natural estuarine function in the restoration area, and to assist in recovery and enhancement of habitat for native fish, invertebrates, wildlife and plant species (Goal 1); and to restore natural dune function, and to assist in recovery and enhancement of habitat for native species, State and Federally-listed or otherwise sensitive plants and associated Sensitive Natural Communities (Goal 2) (see Section 2.2, page 2-2 of the DEIR). The Project would have no effect on the ability for members of the Wiyot Tribe to access the Project Area. The mention of a gate at the Sand Road was erroneously included in the DEIR. No gate is proposed in that location (see Section 3.1.1 of this FEIR for revised Project text). The only gate proposed under the Project is replacement of an existing gate at the intersection of the Project access road and Table Bluff Road.

Response to Comment E-2

Please see the response to Comment E-1.

Response to Comment E-3

Please see the response to Comment E-1. If this comment pertains to revocation of firewood collection along the wave slope and spit (which is not a component of the Project), see Response to Comment B-3 in this FEIR.

Response to Comment E-4

Comment noted.

Response to Comment E-5

Comment noted. CDFW respects and acknowledges that the Project site has cultural, spiritual and economic values to the Wiyot Tribe. Prior to formally consulting with California Native American Tribes (including the Wiyot Tribe) about the Project pursuant to CEQA and Public Resources Code (PRC) Section 21080.3.1, CDFW included the Wiyot Tribe and other local tribes in early coordination efforts on the design and desired outcomes of the Project. Please refer to Section 3.15.1 (page 3.15-1) of the DEIR for a discussion of outreach to the tribes to date. As described in the Response to Comments B-5 and B-6 of this FEIR, CDFW welcomes the opportunity to work with the Wiyot Tribe to inventory botanical resources in the dunes prior to Project implementation to avoid potential impacts, and to replant the dunes with culturally significant species.

Response to Comment E-6

Comment noted.

Response to Comment E-7

Citations noted.

Letter F – California Department of Conservation – Geologic Energy Management Division; Charlene Wardlow

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
801 K Street, MS 18-05
Sacramento, CA 95814
T: (916) 445-9686

10/29/2020

Gordon Leppig
California Department of Fish and Wildlife
619 2nd Street
Eureka, CA 95501
Gordon.Leppig@wildlife.ca.gov

County: Humboldt

Construction Site Well Review (CSWR) ID: 1012166

Assessor Parcel Number(s): 31008101, 31004101, 31008102, 31003101, 30816101, 30816102, 30811101, 30810101, 30804103, 30804102, 30804107, 30809102, 30806101, 30809101

Property Owner(s): California Department of Fish and Wildlife

Project Location Address: Ocean Ranch Unit of the Eel River Wildlife Area, Loleta, California, 95551

Project Title: SCH 2018062020 - Ocean Ranch Restoration Project

Public Resources Code (PRC) § 3208.1 establishes well reabandonment responsibility when a previously plugged and abandoned well will be impacted by planned property development or construction activities. Local permitting agencies, property owners, and/or developers should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil, gas, and geothermal wells. F-1

The Division of Oil, Gas, and Geothermal Resources (Division) has received and reviewed the above referenced project dated 10/28/2020. To assist local permitting agencies, property owners, and developers in making wise land use decisions regarding potential development near oil, gas, or geothermal wells, the Division provides the following well evaluation.

The project is located in Humboldt County, within the boundaries of the following fields:

Our records indicate there are 0 known oil or gas wells located within the project boundary as identified in the application.

- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 0
- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0 F-2
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 0
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0

The Division categorically advices against building over, or in any way impeding access to, oil, gas, or geothermal wells. Impeding access to a well could result in the need to remove any structure or F-3

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
801 K Street, MS 18-05
Sacramento, CA 95814
T: (916) 445-9686

obstacle that prevents or impedes access including, but not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, roadways, and decking. Maintaining sufficient access is considered the ability for a well servicing unit and associated necessary equipment to reach a well from a public street or access way, solely over the parcel on which the well is located. A well servicing unit, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure. F-3

There are no guarantees a well abandoned in compliance with current Division requirements as prescribed by law will not start leaking in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. The Division acknowledges wells plugged and abandoned to the most current Division requirements as prescribed by law have a lower probability of leaking in the future, however there is no guarantees that such abandonments will not leak. F-4

The Division advises that all wells identified on the development parcel prior to, or during, development activities be tested for liquid and gas leakage. Surveyed locations should be provided to the Division in Latitude and Longitude, NAD 83 decimal format. The Division expects any wells found leaking to be reported to it immediately. F-5

Failure to plug and reabandon the well may result in enforcement action, including an order to perform reabandonment well work, pursuant to PRC § 3208.1, and 3224. F-6

PRC § 3208.1 give the Division the authority to order or permit the re-abandonment of any well where it has reason to question the integrity of the previous abandonment, or if the well is not accessible or visible. Responsibility for re-abandonment costs may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general advice set forth in this letter. The PRC continues to define the person or entity responsible for reabandonment as:

1. The property owner - If the well was plugged and abandoned in conformance with Division requirements at the time of abandonment, and in its current condition does not pose an immediate danger to life, health, and property, but requires additional work solely because the owner of the property on which the well is located proposes construction on the property that would prevent or impede access to the well for purposes of remedying a currently perceived future problem, then the owner of the property on which the well is located shall obtain all rights necessary to reabandon the well and be responsible for the reabandonment. F-7

2. The person or entity causing construction over or near the well - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and the property owner, developer, or local agency permitting the construction failed either to obtain an opinion from the supervisor or district deputy as to whether the previously abandoned well is required to be reabandoned, or to follow the advice of the supervisor or district deputy not to undertake the construction, then the person

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
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T: (916) 445-9686

or entity causing the construction over or near the well shall obtain all rights necessary to reabandon the well and be responsible for the reabandonment.

3. The party or parties responsible for disturbing the integrity of the abandonment - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and after that time someone other than the operator or an affiliate of the operator disturbed the integrity of the abandonment in the course of developing the property, then the party or parties responsible for disturbing the integrity of the abandonment shall be responsible for the reabandonment.

F-7

No well work may be performed on any oil, gas, or geothermal well without written approval from the Division. Well work requiring approval includes, but is not limited to, mitigating leaking gas or other fluids from abandoned wells, modifications to well casings, and/or any other re-abandonment work. The Division also regulates the top of a plugged and abandoned well's minimum and maximum depth below final grade. CCR §1723.5 states well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this regulation, a permit from the Division is required before work can start.

F-8

The Division makes the following additional recommendations to the local permitting agency, property owner, and developer:

1. To ensure that present and future property owners are aware of (a) the existence of all wells located on the property, and (b) potentially significant issues associated with any improvements near oil or gas wells, the Division recommends that information regarding the above identified well(s), and any other pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property.

F-9

2. The Division recommends that any soil containing hydrocarbons be disposed of in accordance with local, state, and federal laws. Please notify the appropriate authorities if soil containing significant amounts of hydrocarbons is discovered during development.

F-10

As indicated in PRC § 3106, the Division has statutory authority over the drilling, operation, maintenance, and abandonment of oil, gas, and geothermal wells, and attendant facilities, to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil, gas, and geothermal deposits; and damage to underground and surface waters suitable for irrigation or domestic purposes. In addition to the Division's authority to order work on wells pursuant to PRC §§ 3208.1 and 3224, it has authority to issue civil and criminal penalties under PRC §§ 3236, 3236.5, and 3359 for violations within the Division's jurisdictional authority. The Division does not regulate grading, excavations, or other land use issues.

F-11

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
801 K Street, MS 18-05
Sacramento, CA 95814
T: (916) 445-9686

If during development activities, any wells are encountered that were not part of this review, the property owner is expected to immediately notify the Division's construction site well review engineer in the Northern district office, and file for Division review an amended site plan with well casing diagrams. The District office will send a follow-up well evaluation letter to the property owner and local permitting agency.

F-12

Should you have any questions, please contact me at (916) 324-7120 or via email at Charlene.Wardlow@conservation.ca.gov

Sincerely,

DocuSigned by:
Charlene L Wardlow
067E7BD5EA114A7...

Charlene Wardlow
Northern District Deputy

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0 1 2 km

Powered by WellSTAR
10/23/2020

California Geologic Energy Management Division
801 K Street, MS 18-05
Sacramento, CA 95814-3530
Phone: (916) 445-9686
Email: calgem_webmaster@conservation.ca.gov
www.conservation.gov/calgem

California Natural Resources Agency
Department of Conservation

Well Status & Type

Active	Oil & Gas	Observation
Idle	Gas	Multi-purpose
New	Dry Hole	Water Source
Plugged	Injection	Unknown
Canceled	Cyclic Steam	Core Hole
Unknown	Gas Storage	

Letter F – Response to Comments

Response to Comment F-1 through F-12

Comment regarding the Department of Conservation's well re-abandonment responsibilities are noted. The absence of known oil or natural gas wells within the Project Area boundary is also noted. Should any well be identified within the Project Area boundary prior to or during development activities, it would be reported to the Division of Oil, Gas, and Geothermal Resources. CDFW does not intend to amend the property title(s) to include descriptions of the locations of oil and gas wells because there are no known oil or gas wells located within the project boundary.

The comment letter does not specify any issue regarding the adequacy of the DEIR. Therefore, no further response is necessary.

Letter G – Uri Driscoll

California Department of Fish and Wildlife 11-1-2020
619 2nd Street
Eureka CA 95501

Project #2018062020
Ocean Ranch restoration project
Draft EIR
Public Comment

Dear Mr. Leppig,

The comments below are meant to address the project proposal for Ocean Ranch that would involve the use of bulldozers and other heavy equipment as well as high concentrations of non-specific herbicides in Environmentally Sensitive Habitat Areas (ESHA). G-1

As a long-time and frequent visitor of this area I have witnessed a wide variety of wildlife in this pristine area. The abundant wildlife I have personally seen include Bald eagles, short eared owls, a variety of other raptors too many to list here. Migrating birds are abundant and known to depend on the existing habitat for nourishment . This plan and associated draft EIR does little to address the impacts this project would have on these and other native and migrating species dependent on the existing habitat. G-2

We like many others, enjoy this area as horseback riders and are able to have a unique elevated view while traveling far distances at a modest pace. I can vividly recall seeing a total of 18 Short Eared Owls on one horseback ride last fall all within the emergent wetlands east of the primary dune. On November 1, 2020 we witnessed 17 raptors in one ride. 12 short eared owls, 4 marsh hawks and one Merlin. It can be reasonably presumed they were feeding on the rodent population that occupy these areas. This is a common occurrence although observed species will vary depending on the time of year. G-3

A study done at Lanphere/Christenson Dunes revealed a loss of rodent populations as a result of beach grass and other dune vegetation removal projects. This particular study is not included in the evaluation of impacts for the Ocean Ranch project. In fact, many studies involving the impact from European Beach Grass (EBG) removal projects both local and otherwise are not referenced in this draft EIR. The one referenced study on European Beach Grass control is from 1997. 24 years ago. This is unacceptable. G-4

In reference to the Cowardin wetland science; the deflation plane emergent wetland habitats between the primary and secondary dunes are clearly growing and provide habitat for native and migrating species. These wetlands have not been delineated nor have the potential impacts to these wetland ESHAs been determined. G-5

Burning Ammophila has been proven to retard the serial development of wetland and other native species that make use of the stabilizing features provided by the targeted EBG. In fact, the project area had a significant fire event approximately 5 years ago and the EBG was the first species to rebound. G-6 G-7

The native species such as coyote brush, lupine, coastal pines and others are known to shade out EBG without the need to remove EBG by disrupting established soils with heavy equipment or poisoning the area with non-specific herbicides. The environmental impacts of burning, bulldozing and poisoning this ESHA have not been fully analyzed. However, we can see that the habitat as it exists now provides for a vast abundance of native and migratory species. Alternative 1, No Project should be adopted. G-8 G-9 G-10 G-11

Overall, the goal of the project would not be met in the terms of enhancing habitat for native species. There is no plan to plant native species in areas where targeted species are removed via heavy equipment, manual treatments or herbicides. Opportunistic, pioneering species such as EBG and Spartina will likely reinhabit this habitat without an effective replanting of the species this project prefers. This is a major flaw in this plan and without such a replanting plan firmly in place this proposal fails to support its own goals. If alternative 2 or 3 were to be enacted it would significantly disrupt the habitat and its mammalian and avian occupants through soil disturbance and the collateral damage resulting from high concentration herbicide use. Also not described in this draft EIR is the known fact that in order to treat EBG a much stronger concentration of imazapher must be used further impacting species the projects claims to prefer. G-12 G-13 G-14 G-15 G-16 G-17

It should also be noted the project description states that native dune species are needed to stabilize the dune soils after heavy equipment is employed. However, it is also well known that the existing EBG is a much better stabilizer of dune soils. This EBG benefit leads to the development of wetland habitats critical for migrating and native species. Alternative 1, No Project should be adopted. G-18 G-19

Other similar projects using heavy equipment such as BLM's South Spit project and State Parks Little River and Gold Bluff Beach have all needed repeated treatments. In the case of Little River there have been continuous treatments each year since 2009 and it is likely will need to be continued for many years to come. Maybe forever. G-20

Additionally, prior to EBG treatment Little River State Beach was once host to reliable western snowy plover breeding habitat. It has now become a tragic death trap for plovers attempting to breed there. There has been no breeding/fledgling success within the treated area for 10 of the 11 years since the project's start. G-21

There has been no evidence that Gold Bluff Beach habitat has been enhanced in terms of plover breeding by the bulldozer project that disturbed hundreds of acres. G-22

The South Spit project was unsuccessful for over a decade after the first time it was razed with heavy equipment. The recent success of plover breeding in 2018 following heavy equipment grading is not enough of a determinate that such success is sustainable or worthwhile. G-23

Areas at the Manila Dune Recreation Area subjected to manual EBG treatments for several years was abandoned 6 years ago. There is little evidence that treatments were done at all as the once targeted species have reestablished in the disturbed habitat. G-24

It should be noted that the treated areas in Ma'lel and Friends of the Dunes owned property in Manila have had to undergo repeated heavy equipment grading by the Humboldt Bay Municipal Water District in order to protect the municipal/industrial pipelines and preserve its G-25

access road due to the destabilized sand. The destabilized dunes are a result of the vegetation removal projects currently occurring on the above mentioned properties. Adjacent areas where there are no ongoing vegetation removal activities have NOT required the additional disturbance within the ESHA/wetland habitat from heavy equipment. It can be expected that if the Ocean Ranch dune portion of the project is enacted similar destabilization will occur and additional yet undefined bulldozing will be required to maintain the access road which could also potentially disrupt public access to this area. The assessment of these issues has not been included in the Draft EIR. G-25 G-26

The extremely vague description of the unlimited use of non-specific and highly concentrated herbicides is unacceptable in these ESHA or wetland areas. G-27

The impact to emergent freshwater wetlands resulting from intentionally altering the topography of a primary dune and the likely saltwater intrusion is also not addressed in the draft EIR. G-28

Regarding the Eel River Slough portion of this project; the similar project at McNaulty Slough in Arcata has not been adequately monitored and thus any lessons learned from this project are absent from this evaluation/EIR. Personal observations include the elevation gains in the far reaches of the project area presumably due to the sediment deposits settling during slack tides. This has also led to the unintended establishment of spartina desiflora. This plant was identified as "native" in a local 2003 BLM document. Spartina densiflora was speculated to be brought into Humboldt Bay in the late 1800's although it is a different sub species than the introduced Spartina Arniflora in the San Francisco Bay. Both species of spartina contribute to the living shoreline identified as critical in the protection of shoreline from projected sea level rise. Sea Level Rise is not adequately addressed in this EIR Document for either the spartina or EBG removal aspect of this project. G-29 G-30 G-31 G-32

The project description and draft EIR fails to address; G-33

1. Impacts such as but not limited to diminished rodent populations to established and native mammals as well as native and migratory bird species from significant coastal dune alteration and vegetation removal.
2. The Migratory Bird Treaty has not been considered in this Draft EIR. G-34
3. Emergent and established freshwater wetland impacts from the significant disturbance of established soil mycorrhizal and the likelihood of saltwater intrusion from the proposed altered topography of the primary dune and herbicide treatments. G-35
4. The collateral damage to the non-target species including plants and animals from the use of an extremely highly concentrated and unlimited herbicide treatment program. G-36
5. The lack of a planting plan for preferred species following the heavy equipment or herbicide treatments. Such disturbance of established soils would be subject to opportunistic and pioneering species that are not on the preferred list. G-37

6. Sea level rise projections as it relates to the alteration of shoreline habitat and the benefits of the existing plant habitats for shoreline protections. G-38
7. The likelihood that destabilization of established dune habitat would likely necessitate the need for additional heavy equipment use to maintain the current access road. G-39
8. The lack of supporting documents that similar treatments of coastal dune habitat in this area has resulted in consistent and/or beneficial effects for the western snowy plover. G-40
9. Assessment of additional heavy equipment requirements to maintain the existing access road. G-41
10. Economic impacts are not disclosed in this draft EIR. G-42
11. Public access impacts are not identified should additional grading be required following the destabilizing effects of vegetation removal in areas of established trails and roads. In fact, established horse and walking trails are not identified in this document. G-43

In the provided evaluation of the three project Alternatives it was determined that Alternative 1 (No Project) is rated superior in 11 of the 17 categories listed. It would likely be 12 of 18 if an economic evaluation was conducted. 13 of 19 if sea level rise was assessed. G-44

This is a rare case where the NO PROJECT alternative actually meets more of the project goals than the project itself.

Sincerely,

Uri Driscoll
1578 Fickle Hill Rd
Arcata, CA. 95521

Letter G – Response to Comments

Response to Comment G-1

Comment noted.

Response to Comment G-2

Impact BIO-1 (page 3.4-54) in the DEIR analyzes how the Project could potentially impact native and migratory species. See page 3.4-61 in the DEIR for analysis specific to bird species, as well as Mitigation Measures BIO-1b (Conduct Pre-construction Nest Surveys for Ground Nesting Special-status and Migratory Avian Species) and Mitigation Measure BIO-1c (Avoid and Minimize Potential Impacts to Western Snowy Plover) for measures to reduce potential impacts to a less than significant level on native resident and migratory birds and special status bird species that may occur in the Project Area. Additionally, the Project would conduct invasive plant management activities outside of both the avian nesting season (i.e., work would generally occur between August 1 and March 15, and the Western Snowy Plover nesting season (i.e., work would occur between September 16 and March 15 in Western Snowy Plover nesting habitat). Once complete, the Project would result in long-term improvements in habitat conditions for native resident and migratory birds species by restoring and expanding natural estuarine and dune function.

Response to Comment G-3

Comment noted.

Response to Comment G-4

The 1997 study referenced in the comment is provided in the DEIR to articulate the adverse effects of European beachgrass on native plant communities and species: "*European beachgrass, which was established on the north spit of the Eel River in the 1970s and now dominates the dunes along the western boundary of the ORU, forms a dense monoculture that outcompetes native plant communities, contributes to the decline of certain native plants, limits dune function (e.g., limits sand movement), and decreases shorebird nest success by displacing nesting sites and enhancing cover for predators (Pickart 1997)*." These conclusions remain correct and are accurately represented in the DEIR (see Section 2.1, page 2-2). More recent studies completed by Pickart in 2008 are also referenced and used in the DEIR.

A shift in habitat use by rodents in the dunes is expected following the removal of European beachgrass. As described in DEIR Section 2.5.5 starting on page 2-11, the removal of European beachgrass from the Project Area would be spatially and temporally phased to reduce edge effects and provide native vegetation time to re-establish. Rodents utilizing European beachgrass would have the opportunity to migrate to areas not yet treated and/or utilize other cover, such as driftwood along the beach or native dune species (e.g., American dunegrass [*Elymus mollis*]) as the

site transitions after treatment. As a result, although the removal of European beachgrass would potentially cause a decrease in rodent populations, there would still be adequate opportunities for rodents to find suitable habitat in the Project Area after European beachgrass has been removed. Moreover, other prey sources for raptors, including fish, small birds, and rodents, would remain available in the tidal estuary restoration area adjacent to the dunes.

Response to Comment G-5

The entire 850-acre Project Area, as well as additional areas along McNulty Slough and north of the Project Area, were surveyed for aquatic resources (including wetlands) by Pacific Coast Fish, Wildlife and Wetlands Restoration Association (Pacific Coast Restoration) in 2018. Aquatic resource delineation fieldwork was conducted between March 17 and July 28, 2018, and aquatic resources were observed during both rainy and dry seasons at various stages in the tidal cycle. Wetlands, nor wetland indicator vegetative species, were not observed and therefore were not delineated by Pacific Coast Restoration in the area between the primary and secondary dunes as mentioned in this comment.

Potential impacts on wetlands under the Project are described in Section 3.4-5 of the DEIR (see Page 3.4-74 through 3.4-81).

Response to Comment G-6

European beachgrass is not found in wetland habitats, and therefore burning European beachgrass would have no impact on wetlands. Native vegetation including dune mat is expected to re-establish quickly (both passively from nearby sources and through augmented plantings), as has been demonstrated by other small- and large-scale projects (Pickart 2008). See pages 3.6-21, 3.4-68 and Mitigation Measure BIO-1f (Avoidance and Minimization of Special-status Plant Species during Prescribed Burns) of this DEIR for more information on potential impacts to sensitive resources from prescribed burns and methods to avoid impacts.

Response to Comment G-7

Comment noted. The proposed Project would use prescribed burning in conjunction with herbicide application and manual removal of re-sprouts to effectively manage European beachgrass (see Table 2-3 and Section 2.5.6 in the DEIR).

Response to Comment G-8

The proposed Project may use heavy equipment to mechanically remove European beachgrass, however mechanical removal would be used in areas that are relatively flat, accessible and without substantial native or special status plant resources or wood debris (see DEIR page 2-15). The proposed herbicide (Imazapyr) has been specified consistently throughout the DEIR (see pages 2-11 and 2-14 within Chapter 2 – Project Description). In general, CDFW supports the use of native species to

assist in the management of European beachgrass; however, given the extent and density of European beachgrass that currently occurs in the Project Area, it is highly unlikely shading with native vegetation would effectively eradicate this invasive plant species.

Response to Comment G-9

The DEIR analyzed the environmental impacts of prescribed burning, mechanical removal and herbicide application within the Project Area, including the dunes, in the following sections:

- Section 3.4.5 – Impact BIO-1, BIO-2, and BIO-3
- Section 3.6.5 – Impact GEO-2 and GEO-3
- Section 3.8.5 – Impact HAZ-1 and HAZ-2
- Mitigation Measures:
  - WQ-6 (Designate Ingress/Egress Routes)
  - HWQ-1 (Implement Best Management Practices to Protect Water Quality)
  - HWQ-2 (Erosion and Water Quality Control Measures During Channel Excavation and Ground Disturbance)
  - HHM-1 (Worker Injury from Accidents Associated with Use of Manual and Mechanical Equipment)
  - HHM-2 (Accidents Associated with Release of Chemicals and Motor Fuel)
  - HHM-3 (Worker Health Effects from Herbicide Application)
  - HHM-4 (Avoid Health Effects to the Public and Environment from Herbicide)
  - HHM-5 (Health Effects to Workers, the Public and the Environment Due to Accidents Associated with Use of Hazardous Materials)
  - WQ-2 (Minimize Herbicide Spill Risks)

Environmentally Sensitive Habitat Areas (ESHA) are defined in and considered under the California Coastal Act (CCA). A decision on the effects of the Project on ESHAs will be made by the California Coastal Commission (CCC) during their review of the Project.

Response to Comment G-10

Comment noted. The Project is expected to enhance habitat for native plant communities and wildlife in the Project area.

Response to Comment G-11

Comment noted. A decision on the Alternative selected for implementation will be made by CDFW after the EIR is certified.

Response to Comment G-12

Comment noted. The removal of invasive plants from the Project Area would allow native plant species to reestablish in both the dune and tidal restoration areas, which would restore dune mat Sensitive Natural Communities, and enhance habitat for native fish, wildlife, and bird species. This outcome would meet several Project goals.

Response to Comment G-13

Passive revegetation and intentional planting of native species would be conducted under the Project. Within the dune restoration area and as described on DEIR page 3.6-17, "…native dune vegetation would both be planted in some areas, and is anticipated to revegetate passively in others." As noted on DEIR page 3.6-21, "native vegetation including dune mat is expected to re-establish quickly (both passively from nearby sources and through augmented plantings), as has been demonstrated by other small- and large-scale projects (Pickart 2008)." Planned augmentation plantings in the dune restoration area will consist of the dune mat alliance species observed in the dunes, and dunes-appropriate Wiyot species of cultural significance, as feasible (discussed in Response to Comment B-6 of this FEIR).

Natural recruitment of native salt marsh species is anticipated within the tidal restoration area after dense-flowered cordgrass is removed (see "Post-Construction Potential Habitat Changes" and "Tidal Marsh Habitat Special-status Plants" beginning on page 3.4-69).

Response to Comment G-14

Please refer to the Response to Comment G-13 for a discussion of how the dune and tidal restoration areas will be revegetated. As described in Section 2.7-3, the Project also includes ongoing management of invasive plant species, including removal of up to 10 acres of dense-flowered cordgrass and 10 acres of European beachgrass per year after initial treatments are complete.

As mentioned on page 3.6-21 in the DEIR, "Native vegetation including dune mat is expected to re-establish quickly (both passively from nearby sources and through augmented plantings), as has been demonstrated by other small- and large-scale projects (Pickart 2008)." Primary and secondary treatment areas will be monitored in accordance with Table 2-3 in the DEIR to manage European beachgrass that may reinhabit managed areas.

Response to Comment G-15

Comment noted. Please see response to Comment G-13 and G-14 for additional information on planned replanting efforts.

Response to Comment G-16

The DEIR acknowledges that some soil disturbance would occur under Alternative 2 (Estuarine Restoration with Limited Breaches to McNulty Slough) and a substantially greater amount of soil disturbance would occur under Alternative 3 (No Herbicide Use). Soil disturbance would be temporary, and would largely only occur during mechanical treatments of invasive plants (use of excavators and bulldozers), and when intentionally breaching levees and building habitat ridges. Soil disturbance would predominantly occur in the estuarine restoration component of the Project, and would be temporary. Soil disturbance via mechanical treatments in the dune restoration area would only occur in areas that are relatively flat, accessible and without substantial native or special status plant resources (see DEIR page 2-15). All transportation of heavy equipment would be conducted in accordance with Mitigation Measure WQ-6, which would require designation of ingress and egress access routes, and confine soil disturbance via transportation to select areas, to thereby reduce potential impacts.

Should herbicide be used within the Project Area, it would be used in conjunction with multiple mitigation measures identified in the DEIR and provided to be protective of fish, wildlife, and sensitive natural communities, including:

- HHM-2 (Accidents Associated with Release of Chemicals and Motor Fuel)
- HHM-4 (Avoid Health Effects to the Public and Environment from Herbicide)
- WQ-2 (Minimize Herbicide Spill Risks)
- HWQ-1 (Implement Best Management Practices to Protect Water Quality)
- HWQ-2 (Erosion and Water Quality Control Measures During Channel Excavation and Ground Disturbance)

In all instances, these measures require Imazapyr only be applied in accordance with the label by a Qualified Applicator, or under the supervision of a Qualified Applicator; during appropriate weather conditions (e.g., dry with no rain forecast for 48 hours, winds less than 10 mph); and at application rates and quantities that minimize the potential for herbicide drift.

Whenever feasible, vegetation biomass would be reduced before herbicide application through prescribed burning, mowing, grinding, or manual/mechanical removal to reduce the amount of herbicide needed. The lowest effective herbicide application rates and concentrations that do not exceed the label requirements would be used. As a result, a “high concentration” of herbicide use is not anticipated due to the targeted use of herbicide, the Mitigation Measures regulating its use, and the short half-life of Imazapyr which rapidly degrades in sunlight and dissipates in water

within several days (H.T. Harvey and GHD 2013). Pless (2005) found no detectable residues of Imazapyr in either water or sediment within two months.

Response to Comment G-17

Please refer to Response to Comment G-16 for additional information on use of herbicides.

Response to Comment G-18

The primary objective of the dune restoration component of the Project is to restore Sensitive Natural Communities and dune function within the dune restoration area. European beachgrass forms a dense monoculture that reduces sand movement to the detriment of dune function, biodiversity, and native plant establishment. Restoration of native dune mat communities will allow for semi-stable conditions in the Project Area after establishment of native plants.

Moreover, a study conducted to quantitatively measure the differences in morphology of restored and invaded foredunes on the nearby North Spit of Humboldt Bay found the height of invaded and restored dunes to not be significantly different (McDonald 2020). Foredune areas are capable of retaining similar elevations compared to surrounding invaded areas after European beachgrass removal, and restored native dunes may also provide increased habitat function and plant diversity by allowing natural processes to occur. An excerpt from the study further describes this:

The removal of Ammophila arenaria has not resulted in foredunes that are significantly different in height from the surrounding invaded foredunes on the North Spit of Humboldt Bay. The invaded dunes are not significantly taller, but their significantly steeper slope might be contributing to the misperception that they are higher than the more gradually sloping native dunes. The dense growth pattern and thick web of rhizomes of A. arenaria might allow the foredunes to accrete sediment at a steeper angle. In contrast, native Elymus mollis might be allowing sand to move farther from the base of the foredune so that dunes build up gradually to a similar height with a peak further back from the shore (McDonald 2020).

With respect to stability, it can therefore be inferred that restored and invaded dunes have similar stabilities given they can grow to similar heights.

Response to Comment G-19

CDFW disagrees that European beachgrass dominated dunes in the Project Area are well suited for the establishment of wetlands. In general, hydrology and hydroperiod facilitate the establishment of wetlands; the formation of wetlands on the tops of European beachgrass plateau-like dunes is unlikely, as the water table is not near the surface, which is needed for wetlands development/sustainability. This is supported by the Preliminary Aquatic Resources Delineation completed in support of the Project (PCFWWRA 2018), where the only wetlands mapped within the dune

restoration area were located along the ecotone proximate to the estuarine restoration area, and not within European beachgrass dominated dunes.

Response to Comment G-20

Comment noted. The Project includes ongoing maintenance of the dunes and tidal restoration area to control invasive plants. Please see the Response to Comment G-14.

Response to Comment G-21

Comment noted. The Project would have no impact on Western Snowy Plover nesting opportunities or success at Little River State Park.

In general, Western Snowy Plover prefer to nest in open areas such as blowouts above the high tide line on sand spits, dune-backed beaches, lagoon and estuary salt pans, and beaches near river and estuary mouths (USFWS 2007). They also may nest on sparsely vegetated dunes, salt pond levees, and river bars (Colwell et al. 2005, USFWS 2007). In Humboldt County, plovers preferentially select for gentle slopes of 0-4% on wide stretches of beach (220 ± 98 meters [m]) when choosing nest sites (Leja 2015), with nest scrapes or depressions in the sand constructed in areas relatively free of European beachgrass cover (Muir and Colwell 2010).

The eradication of European beachgrass from dune restoration area and subsequent reestablishment of native dune mat species would benefit Western Snowy Plover by increasing their habitat quality and foraging opportunities in the Project Area. Please see the response to Comment G-21.

Response to Comment G-22

Comment noted. The Project would have no impact on Western Snowy Plover nesting opportunities or success at Gold Bluff Beach.

Response to Comment G-23

Comment noted. The Project would have no impact on Western Snowy Plover nesting opportunities or success at South Spit. Please see the response to Comment G-21.

Response to Comment G-24

Comment noted.

Response to Comment G-25

Please refer to the Response to Comment G-18 for a discussion of the anticipated effects of the Project on dune stability.

Response to Comment G-26

Please refer to the Response to Comment G-18 for a discussion of the anticipated effects of the Project on dune stability.

The only “access road” within the dune restoration area is the Sand Road CDFW maintains a sign at the northern terminus of Sand Road to inform users of the potential hazards of using the Sand Road, but does not actively maintain this road via heavy equipment. No management changes are proposed under the Project, and thus no grading or other active maintenance of the Sand Road will be carried out by CDFW as part of the Project.

Response to Comment G-27

The DEIR states that the Project would utilize the herbicide Imazapyr to specifically target dense-flowered cordgrass and European beachgrass. How the herbicide would be used under the Project is described in detail in Section 2.5.2 (page 2-11) and Section 2.5.6 (page 2-14); the location of where treatments are proposed is depicted on Figures 2-4 and 2-5; and an analysis of effects of herbicides on wetlands is provided in Section 3.4-5 (page 3-80) and the Final EIR for the Humboldt Bay Regional *Spartina* Eradication Plan, which this Project EIR is tiered from (See Response to Comment B-4). Please refer to the Response to Comment G-16 for a summary list of mitigation measures provided in the DEIR to avoid potential adverse effects on fish, wildlife and sensitive habitat areas from the use of Imazapyr.

Response to Comment G-28

The comment is deemed speculative, as it assumes the topography of the primary dune would be modified, which would then alter freshwater wetlands and lead to saltwater intrusion. As mentioned in Response to Comment G-16 and on Table 2-3 and page 2-15 of the DEIR, treatment of European beachgrass in the dunes would utilize prescribed burning and herbicide and/or manual removal of re-sprouts. Soil disturbance via mechanical treatments in the dune restoration area would only occur in areas that are relatively flat, lack significant woody debris, are accessible and are without substantial native or special status plant resources (page 2-15). The topography of the primary dunes would not substantially be modified due to the intentional retention of European beachgrass rhizomes and roots, see Impact GEO-3 specifically beginning on page 3.6-21 of the DEIR for additional information. Additionally, no wetlands or other aquatic resources were delineated within the dunes outside of the Brewer’s rush dunes on the eastern edge and ecotone to the salt marsh (Pacific Coast Restoration 2018).

Response to Comment G-29

Comment noted. Dense-flowered cordgrass (*Spartina densiflora*) is a hearty and vigorous invasive species that has been observed at low, medium and high marsh environments. CDFW anticipates recurring mechanical, chemical and prescribed

burning treatments to successfully manage this species. Sediment movement and deposition due to tidal movement is anticipated to continue and to improve under the Project following removal of dense-flowered cordgrass. Monitoring of re-established patches of dense-flowered cordgrass would occur following Project construction and invasive plant management, with the intent of treating small infestations before they become large and challenging to manage. See Impact HWQ-3 on page 3.9-26 for a discussion of channel dynamism.

Response to Comment G-30

Comment noted.

Response to Comment G-31

Comment noted. The Project proposed to remove invasive populations of dense-flowered cordgrass from the Project Area in favor of native estuarine plant species equally capable of attenuating sea level rise. The Project also includes the creation of high marsh habitat, which would provide additional sea level rise resiliency. The Project is not, however, a "living shoreline" project in that it is not specifically proposed to provide additional bank stabilization within the Project Area.

Response to Comment G-32

Removal of dense-flowered cordgrass and European beachgrass would have no impact on sea level rise related to the Project Area or surrounding lands, and treated areas would reestablish with native vegetation. More generally, the Project would restore ecosystem function and create high marsh habitat areas, which would increase coastal resilience to sea level rise.

Response to Comment G-33

See Response to Comment G-4.

Response to Comment G-34

See Response to Comment G-4.

Page 3.4-46 of the DEIR describes the Migratory Bird Treaty Act (MBTA) and its application. See DEIR page 3.4-61 "Bird Species" for analyses on resident and migratory birds that may be present in the Project Area, and Mitigation Measure BIO-1b, which requires pre-construction nest surveys for ground nesting special-status and migratory avian species. There are no trees within the Project Area, and thus surveys would be focused on ground nesting species. Mitigation Measure BIO-1b directly complies with the MBTA through the surveying and determination that a work area is clear of special-status (MBTA-protected) avian species, or that an avian species is present and a construction-avoidance buffer would be implemented to avoid impacts to the species.

Response to Comment G-35

See Response to Comment G-28 for a discussion of potential wetland impacts from proposed altered topography (and potential saltwater intrusion) associated with the primary dune. Regarding potential impacts to wetlands from herbicide use, please see Responses to Comments G-19 and G-27.

Response to Comment G-36

See Response to Comment G-27.

Response to Comment G-37

See Response to Comment G-13 and G-14.

Response to Comment G-38

See Response to Comment G-31 and G-32.

Response to Comment G-39

See Response to Comment G-26.

Response to Comment G-40

According to the USFWS 2007 recovery plan for Western Snowy Plover, there are three limiting factors that adversely affect Western Snowy Plover: the loss and degradation of habitat (owing primarily to invasive plants and urban development), increasing predator populations (resulting in high levels of egg and chick loss), and human disturbance. Raby and Colwell (2020) used 14 years of data (n = 610 nests) at eight sites in Humboldt County to determine the relative influence of the three limiting factors on nest survival. Their findings include the following:

> *Habitat restoration had the greatest influence on nest survival. Both natural (tidal overwash) and human implemented restoration had a positive effect on nest survival, whereas unrestored areas had a negative effect. Naturally restored areas had a stronger effect (higher and less variable survival estimates) on nest survival than human-restored areas. Human and predator activity were not strong predictors of nest survival. Consequently, we recommend that managers focus on conserving, maintaining, and creating restoration areas to enhance Snowy Plover nest survival.*

Additionally, the Raby and Colwell (2020) article states the following:

> *Loss and degradation of Snowy Plover breeding habitat is largely associated with the rapid expansion of the nonnative European Beach Grass Ammophila arenaria (USFWS 2007), which creates steep and densely vegetated foredunes and backdunes (Buell et al. 1995) and potentially provides cover for predators (USFWS 2007). Plovers prefer to court and*

nest in relatively flat, open, sparsely vegetated habitats, which probably enables early detection of predators (Page et al. 2009, Muir & Colwell 2010, Leja 2015). Habitat restoration creates suitable Snowy Plover breeding habitat by using heavy equipment to recontour (flatten) the foredune and by removing invasive plants (Zarnetske et al. 2010). Sometimes oyster shells are spread to increase crypsis, and thus survival, of eggs and chicks by creating a heterogeneous substrate (Colwell et al. 2011). Snowy Plovers preferentially selected restored habitats (84% of nests) in northern California (Leja 2015) and habitat management significantly increased nest survival along the Oregon coast (Dinsmore et al. 2014).

This additional regional-based information shows that Snowy Plovers prefer restored habitat compared to unrestored habitats.

Response to Comment G-41

See Response to Comment G-26.

Response to Comment G-42

CEQA requires an analysis of physical impacts to the environment; it does not require analysis of social or economic impacts (14 CCR §15131 and 15382).

Response to Comment G-43

See Response to Comment G-26 for a discussion of management of the Sand Road. See Section 2.6.2 (page 2-15) and Figure 2-3 of the DEIR for a discussion and depiction, respectively, of trail locations within the tidal restoration area.

Response to Comment G-44

Comment noted. A decision on the Alternative selected for implementation will be made by CDFW after the EIR is certified.

3. Errata

The purpose of this errata is to document revisions to the DEIR that are intended to clarify project details since it was submitted to the Office of Planning and Research State Clearinghouse on September 17, 2020, and publicly circulated between September 17, 2020 and November 2, 2020. The following Project details are addressed in this errata, as shown in Table 3-1, below.

The errata includes excerpts of text from the DEIR that are proposed for modification, and does not include the entire DEIR. Specifically, the entire subsection that contains the text proposed for modification is copied into the errata with newly proposed text shown as **underlined and bolded;** deleted text from the original DEIR shown as stricken with ~~single strikethrough~~; and unchanged text is provided in normal font. Only the subsections of the original DEIR that include portions of text proposed for modification are copied into the errata.

Table 3-1 List of Proposed DEIR Text Modifications Captured in Errata

Section of Errata	Topic of Proposed Changes	Section of DEIR
3.1.2	Access Road and Parking Area	Section 2.6.1
3.1.1	Maintenance	Section 2.7.3
3.1.5	Biological Resources - Impacts and Mitigation Measures	Section 3.4.5
3.1.3	Citation Change	Section 3.8.5
3.1.4	References	Section 3.8.7

3.1 Proposed Modifications to DEIR

The following modifications to the DEIR are displayed below:

3.1.1 Maintenance (DEIR Section 2.7.3, page 2-20)

Ongoing maintenance activities may be necessary to assure the long-term hydraulic and ecological functions of the Project, and to continue to support safe and reliable access to the restoration area by the public. The following maintenance actions are anticipated after the Project is constructed:

- Minor maintenance of built infrastructure, including:

  – Grading and/or resurfacing portions of the access road and parking area (once in 10 years)

– Cleaning debris from the non-motorized boat put-in and bridges on the trail (annually)

– Mowing vegetation from the trail system (semi-annually)

- **Maintenance of estuarine channels, including:**
  - **Removal of up to 50 cubic yards of sediment per year**

Monitoring activities are considered a subcomponent of Project maintenance. Specific monitoring activities are to be determined, however would generally include observations of plant **and animal** species and measurements to determine whether the Project has been successful in improving habitat conditions for special-status plants**, fish,** and wildlife. The frequency of monitoring will be determined during Project permitting. Observations would occur on foot and would not include the use of heavy machinery.

3.1.2 Access Road and Parking Area (DEIR Section 2.6.1, page 2-15)

An existing gravel parking area is located at the north end of an existing gravel road that leads south from Table Bluff Road to the estuarine restoration area. Under the Project, both the existing parking area and road would be improved by grading and resurfacing; the road would be resurfaced with asphalt or **im**pervious concrete and the existing parking area with gravel **or pervious concrete**. A footpath running parallel to the roadway would be surfaced with gravel. A new asphalt or pervious concrete parking area would be established near the south end of the access road. The new parking area would contain six to ten parking spaces to accommodate vehicles and offer connection to the proposed non-motorized multi-use trail system. An American with Disabilities Act (ADA)-accessible parking space with a van pull out area would also be provided. Three concrete picnic tables and a concrete pad would be installed adjacent to the parking area.

Currently, there is a locked gate that restricts vehicle access into the estuarine restoration area from Table Bluff Road. Under the Project, the gate would be replaced and operated to provide access during daylight hours. A kiosk and interpretive display would be located in the parking area. **Interpretive signage would include language to inform visitors to stay on trails and in other designated visitor-use areas.** A ~~second gate,~~ kiosk and interpretive display would **also** be installed at the entrance to the sand road off of South Jetty Road.

3.1.3 Herbicide Application for Dense-Flowered Cordgrass Management (Section 3.8.5, page 3.8-11)

Other general concerns with herbicide use focus on the risk to wildlife and human health. Imazapyr inhibits the enzyme acetolactate synthase in plants, blocking the production of three essential amino acids (valine, leucine, and isoleucine) (Washington DOE 2009). This enzyme is not present in animals. EPA has

categorized Imazapyr as “practically non-toxic” to birds, ~~and~~ **small** mammals**, and bees** (~~U~~EPA 20**05**~~16~~). The prescribed application rate of Imazapyr does not result in aquatic or terrestrial concentrations that exceed screening levels for toxicity to wildlife. Risk for bioaccumulation is low because it is highly soluble in water and has low solubility in lipids, meaning it does not concentrate in animal fat or organ tissue. Therefore, the application of this herbicide would not impact the study area environment through food web exposure.

3.1.4 References (Section 3.8.7, page 3.8-18)

United States Environmental Protection Agency (EPA). 2016. Technical Overview of Ecological Risk Assessment - Analysis Phase: Ecological Effects Characterization. ~~https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/technical-overview-ecological-risk-assessment-0~~.

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3.1.5 Biological Resources - Impacts and Mitigation Measures (Section 3.4-5, pages 3.4-57 to 3.4-58, 3.4-60, 3.4-68)

Impact BIO-1: Would the Project have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW, USFWS or NMFS?

The Project has been designed to avoid and minimize impacts to listed and sensitive species to the extent possible through design considerations (e.g., the seasonal timing of construction work to avoid disturbing nesting birds, locating the parking area in a disturbed ruderal location). None-the-less, construction, invasive plant management and maintenance of the Project could directly and indirectly impact populations of special-status wildlife and plant species and their habitats that occur in the study area.

Fish and Other Aquatic Species

A key goal of the Project is to restore and expand the area of tidal influence and enhance habitat for native fish, invertebrates, wildlife and plant species. Increased tidal exchange and enhancement of existing tidal channels in the Project Area is anticipated to provide a significant improvement to fish and other aquatic species’ habitat as compared to existing conditions. There is no critical habitat for Tidewater Goby in the Project Area, although critical habitat exists for this species within the Eel River estuary, adjacent to and approximately 900 feet (274 meters) east of the study area. Critical habitat for Chinook Salmon (California Coastal DPS) and Coho

Salmon (Southern Oregon/Northern California ESU) exists within McNulty Slough. There is no critical habitat within the study area for Longfin Smelt, Green Sturgeon, Eulachon or Steelhead Trout. State-listed Longfin Smelt, such as those recently documented in newly restored Riverside Ranch, are present nearby (Kramer 2016). Pacific Lamprey, a California species of special concern, is known to migrate into the Eel River throughout the year (Stillwater Sciences 2010).

Construction, Dewatering and Relocation Activities

Impacts to special-status fish species, including Tidewater Goby, juvenile salmonids, Green Sturgeon, Longfin Smelt, Eulachon and Pacific Lamprey, could occur during various construction activities, including all work that requires excavation or fill in tidally influenced portions of the Project Area. Although salmonids and other estuarine or anadromous fishes are believed to be in low numbers in the Project Area where most work would occur, some individual animals almost certainly occur in tidal areas where fill or excavation is proposed and could be affected by construction activities. For example, installing cofferdams and pumping water could isolate and/or entrain fish. Hydraulic dredging could also entrain fish. In the short term, construction activities including dredging, fill, and levee breaching or lowering would result in disturbance to soils that could affect turbidity and suspended sediment, which in turn could degrade water quality and impair fish mobility.

Dewatering is proposed, as feasible, for Areas B, C, D and E in order to isolate work areas as much as possible. Fish currently have access to Areas A, B, C and D via the existing channel network (see Figure 3.9-4 in Section 3.9 Hydrology and Water Quality), therefore dewatering Areas B, C and D may adversely affect fish. Potential adverse impacts from dewatering include stranding or entrainment into pumps, mortality due to dewatering equipment, debris, or relocation.

Area A would be constructed during low tide, and would not be dewatered. Therefore equipment would be within the marsh and levee areas and would excavate within channels that contain water and aquatic species. Potential adverse impacts from construction within Area A include: crushing, injury and stranding of fish and other aquatic species, all of which can lead to mortality. These potential impacts would be significant. Mitigation Measure BIO-1a (below) would be implemented to reduce potential adverse impacts to these species from dewatering and construction activities, in addition to other potential stressors. **Although the dry-season work windows provided in Mitigation Measure BIO-1a may coincide with Tidewater Goby spawning and larval development, the footprint of available Tidewater Goby habitat may be smaller because summer conditions are typically drier, reducing the area in which Tidewater Goby may be present. In addition, conducting work during the dry season will minimize the impact on water quality from sediment or from spills that could occur during construction, invasive plant management and/or maintenance activities (e.g., oil, fuel, hydraulic fluid) because there would be a lower probability sediment or chemicals would be mobilized to surface waters.**

Finally, internal and external levee breaching would alter hydrologic functions (e.g., salinity, flow, velocity) which could create an environment intolerable for some life stages of Tidewater Goby. However, in the long-term, the Project would result in a net gain in suitable Tidewater Goby habitat, and an increase in available higher quality habitat by including backwaters and slow moving low salinity habitat. Recent experience on the nearby Riverside Ranch/Salt River Ecosystem Restoration Project documented a rapid increase in Tidewater Goby abundance and use of newly available habitat in the first years after tidal habitat restoration (Kramer 2016). Tidewater Goby are expected to increase in abundance within the Project Area after estuarine restoration activities are complete.

Invasive Plant Management

Invasive plant management activities would occur within the dunes and estuarine restoration areas. Treatment activities of European beachgrass in the dunes would have no impact on aquatic species because aquatic habitat does not exist in that portion of the Project Area. Treatment of dense-flowered cordgrass in the estuarine restoration area would likely occur concurrent with, or just after, construction activities, and would occur thereafter as needed and as funding allows. Equipment operating in the marsh to remove dense-flowered cordgrass would pose similar potential adverse impacts to aquatic species as described above for construction activities. The use of land-based treatments for invasive plant management (top mowing, grinding, tilling, prescribed burning) may result in loose soil which may deliver sediment to the water column. Potential impacts from in-water and land based invasive plant management treatments would be reduced with implementation of Mitigation Measure BIO-1a (below). Invasive plant management treatments involving the use of herbicide, and potential impacts to fish and aquatic species from herbicide application, are discussed below under the “Water Quality” heading.

Maintenance

Maintenance activities include periodic infrastructure repair and maintenance of amenities (trail, non-motorized boat put-in, parking lot, road), and monitoring activities. The non-motorized boat put-in and potentially monitoring activities would be the only maintenance activities in proximity to aquatic species. Maintenance of the non-motorized boat put-in would be completed within the footprint of the proposed infrastructure and would not cause deterioration of aquatic habitat for fish species. Similarly, monitoring activities would be conducted on foot and would be minimally invasive to the surrounding environment. No impact to aquatic wildlife species would occur from maintenance activities.

Mitigation Measure: Implement Mitigation Measure BIO-1a.

Mitigation Measure BIO-1a: Avoidance and Minimization Measures for Fish and Other Aquatic Species.

The following measures will be implemented to avoid and minimize impacts to fish and other aquatic species during construction, invasive plant management and maintenance activities:

- The in-water work window for construction, invasive plant management and maintenance activities will be limited to the dry-season (between June 15 and October 15) to avoid or minimize impacts to Tidewater Goby, juvenile salmonids, and Longfin Smelt. ~~Although dry-season work windows may coincide with Tidewater Goby spawning and larval development, the footprint of available Tidewater Goby habitat may be smaller because summer conditions are typically drier, reducing the area in which Tidewater Goby may be present. In addition, conducting work during the dry season will minimize the impact on water quality from sediment or from spills that could occur during construction, invasive plant management and/or maintenance activities (e.g., oil, fuel, hydraulic fluid) because there would be a lower probability sediment or chemicals would be mobilized to surface waters.~~ Dredging and filling activities should be conducted as late into the construction work window as feasible, to minimize impacts to Goby burrows ~~(Stillwater Sciences 2006)~~, and because temperatures in the Project Area where dredging is likely to occur tend to be too warm for rearing salmonids after July ~~(Wallace & Gilroy 2008, Ray 2018a)~~.
- Project construction would be phased to allow Tidewater Goby, juvenile salmonids, Longfin Smelt and Pacific Lamprey to move on their own or be relocated to sites outside of where active ground disturbance is occurring. Before potential dewatering or other in-water Project activities begin, a qualified biologist shall ensure that native aquatic vertebrates, and large native invertebrates (if feasible), are relocated out of the construction footprint into a flowing tidal channel segment. Where dewatering needs to occur, all pump intakes will be screened in accordance with **National Marine Fisheries Service (**NMFS**)** and CDFW fish screening criteria ~~(NMFS 1997, CDFG 2010c)~~. In deeper or larger areas, water levels shall first be lowered to manageable levels using methods to ensure no adverse impacts to fisheries and other special-status aquatic species occur. The qualified biologist shall then perform appropriate seining or other trapping procedures to a point at which the qualified biologist is assured that almost all individuals within the construction area have been caught. These individuals shall be kept in buckets with aerators and relocated to an appropriate flowing tidal channel segment or other appropriate habitat as identified by the qualified biologist in consultation with NMFS, **U.S. Fish and Wildlife Service (**USFWS**)** and CDFW.
- A pre-construction fish screening shall take place before any in-water Project activities take place in channels that are not dewatered, or are partially dewatered in areas where Tidewater Goby and other native aquatic species have been known to occur (based on previous surveys~~, see Ray 2018b, and Scheiff and Gilroy 2013~~), **or are expected to occur**. The pre-construction fish screening shall include **both relocation (i.e., seining) and** in-water movement in the proposed work area in order to scare fish species away from the work area.

- Amphibious vehicles, or other low ground pressure equipment, will not be allowed to contact the channel substrate where special-status fish species may be present. The vehicles will be operated in such a manner that they avoid causing erosion into the channels, to the extent possible.
- To minimize erosion effects, silt fencing (or a similar best management practice [BMP]) **may** ~~will~~ be installed along the edge of the work area when adjacent to a waterway (as feasible **and where determined effective**) and in locations where native aquatic species typically occur (based on previous surveys ~~Ray 2018b, Scheiff and Gilroy 2013, or CNDDB~~). **If used, s**~~S~~ilt fencing **will** ~~shall~~ be installed when using methods that are most likely to cause erosion such as grinding, tilling, disking and digging/excavating. Silt fencing **does not need to be considered** ~~is not required~~ if conducting construction, invasive plant management or maintenance activities by hand, or if the Project activity does not involve soil disturbance (such as top mowing, herbicide application or smothering).

Mitigation Measure BIO-1b Conduct Pre-construction Nest Surveys for Ground Nesting Special-status and Migratory Avian Species

The following measures will be implemented prior to and during construction and invasive plant management activities to avoid and minimize impacts to nesting birds. Maintenance activities that include ground disturbance are also subject to this mitigation measure.

- CDFW shall attempt to conduct all Project construction and invasive plant management activities in areas where nesting could occur ~~to~~ **during** the period outside the bird nesting season (generally August 1 to March 15). If Project activities are proposed to occur outside the bird nesting season, no further mitigation is necessary. If activities are proposed in the bird nesting season (generally considered between March 16 and July 31), a qualified biologist shall conduct pre-construction surveys within the vicinity of the impact area to check for nesting activity and to evaluate the site for nesting bird species. The qualified biologist shall conduct a minimum of one pre-construction survey within the seven-day period prior to Project construction or invasive plant management activities. If Project activities lapse for seven days or longer during the nesting season, a qualified biologist shall conduct a supplemental avian survey before Project work is reinitiated.
- If an active nest is found, the qualified biologist shall determine the size of an appropriate construction-avoidance buffer zone to be established around the nest and/or operational restrictions in consultation with the CDFW and USFWS (if Federally-listed). Buffer zones shall be delineated with flagging and maintained until the nestlings have fledged and are independent of the nest. Buffer sizes shall take into account factors such as (1) noise and human disturbance levels at the construction site at the time of the survey and the

noise and disturbance expected during the construction activity; (2) distance and amount of vegetation or other screening between the construction site and the nest in order to reduce visual stress; (3) sensitivity of nesting species and behavior of the nesting birds; (4) location of the nest in relation to areas to be treated with herbicide.

Mitigation Measure BIO-1e: Minimize Impacts to Special-Status Plant Species

A qualified biologist shall stake out locations of special-status plant populations prior to construction. Staking efforts shall target consolidated populations (i.e., more than 10 plants in a grouping), and shall only identify annual species if work is proposed during their blooming period. The qualified biologist shall also provide training to construction or plant management crews to ensure that they avoid and minimize impacts to these plants.

No heavy equipment shall be used to carry out invasive plant management within 10 feet (3 meters) of dune mat habitat.

Project-related access routes located in the dunes shall be marked, **shall stay within the pre-existing sand road footprint**, and shall avoid dune mat habitat.

Mitigation Measure BIO-1f: ~~Avoidance and Minimization of~~ **Avoid and Minimize Impacts to** Special-Status Plant Species during Prescribed Burns

In order to minimize potential impacts to special-status plant species during a prescribed burn, the following measures will be implemented:

- Prescribed burns will occur between August 1 and March 15 (i.e., outside the nesting bird window,) which is after the primary blooming period for annual species known to the dunes.
- All prescribed burn treatments will be conducted in accordance with an approved burn plan coordinated with the California Department of Forestry and Fire Protection (CAL FIRE)

Mitigation Measure WQ-1: Managed Herbicide Control

Herbicide shall be applied directly to plants and at low or receding tide to minimize the potential application of herbicide directly on the water surface, as well as to ensure proper dry times before tidal inundation. Herbicide shall be applied by a certified applicator or under the direct supervision of trained, certified or licensed applicators, and in accordance with application guidelines and the manufacturer label. The Project shall obtain coverage under the current statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Residual Aquatic Pesticide Discharges to Waters of the U.S. from Algae and Aquatic Weed Control Applications ~~(SWRCB 2013)~~.

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